



THE OPEN UNIVERSITY OF SRI LANKA

B.Sc. / B.Ed. DEGREE PROGRAMME – LEVEL 04

BOU2103/BOE4103/BTU2104/BTE4104 – PRINCIPLES OF MICROBIOLOGY

FINAL EXAMINATION – 2011/2012

DURATION : TWO (02) HOURS.

DATE : 9th January 2012

TIME : 09.30 a.m. – 11.30 a.m.

ANSWER ANY FOUR QUESTIONS. USE FULLY LABELLED DIAGRAMS WHERE NECESSARY.

1.
 - a) What do you understand by the term 'vector'? List the characters of a good vector?
 - b) Out line the process of manufacturing of 'human insulin' using genetic engineering.

2.
 - a) 'Although viruses are considered as microorganisms, they are not included in the classifications of life'. Discuss this statement.
 - b) Describe 'Lytic' and 'Lysogenic' patterns of replication of viruses.

3.
 - a) Write an account on the nutritional categories of microorganisms.
 - b) Briefly describe the different environmental factors that affect the growth of microorganisms.

4. Write a comprehensive account on antibiotics. You may include its discovery, types of antibiotics, chemical nature, modes of action and the limitations of its use.

5.
 - a) Describe the typical growth curve of bacteria and briefly state how this differs from the typical growth curve of viruses.
 - b) What is the underlying principle of a continuous culture?

6. Write short notes on the following.
 - a) Glycolysis
 - b) Louis Pasteur
 - c) Bacterial conjugation
 - d) Slide culture technique